



Missouri's

Physician and Surgeon Workforce

2015

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Missouri's Physician and Surgeon Workforce 2015

Physicians and surgeons diagnose and treat injuries and illnesses. Physicians take medical histories; examine patients; prescribe medications; and order, perform, and interpret diagnostic tests. In addition, they advise patients on proper diet, hygiene and preventive healthcare. Surgeons operate on patients to treat injuries, diseases and deformities.¹⁵

Physicians specialize in a wide variety of disciplines. Some of the most common types, which will be highlighted throughout this report, are:¹⁵

- family and General Physicians
- pediatricians
- internists
- obstetricians and Gynecologists
- psychiatrists
- anesthesiologists

Other common specialties include allergy/immunology, cardiology, dermatology, emergency medicine, endocrinology, geriatrics, medical genetics, neurological surgery, neurology, oncology, ophthalmology, orthopedics, pathology, physical medicine and rehab, plastic surgery, radiology and urology.¹⁹



Allopathic Physician vs. Osteopathic

There are two types of practicing physicians, Allopathic physicians (MD) and Osteopathic physicians (DO). The two types are very similar and both are fully qualified physicians that have been licensed to perform surgery and prescribe medication.⁴ According to the American Osteopathic Association (AOA), "While DOs and MDs have

many things in common; osteopathic medicine is a parallel branch of American medicine with a distinct philosophy and approach to patient care."⁴ Comparisons of the percent of MDs and DOs in Missouri for the six highlighted specialties as well as physicians in Missouri as a whole are portrayed in Figure 1.¹⁹

Figure 1. Comparisons of the Percent of Medical Doctors and Osteopathic Doctors in Missouri, 2015¹⁹

Specialty	MD Percent	DO Percent	Total
Family/General	1,521 (65%)	827 (35%)	2,348
Pediatrician	1,456 (92%)	132 (8%)	1,588
General Internist	3,171 (91%)	312 (9%)	3,483
OB/GYN	723 (88%)	96 (12%)	819
Psychiatrist	751 (91%)	77 (9%)	828
Anesthesiologist	829 (86.5%)	129 (13.5%)	958

Overall Education

Undergraduate, medical school and graduate medical education are required in order to become a licensed physician. Physicians must obtain a bachelor of science or arts; attend four years at a U.S. medical school accredited by the Liaison Committee on Medical Education (LME); and complete a 3-7 year residency program under senior physician supervision. The length of residency depends on the specialty. Physicians who choose to become highly specialized in a particular field must also complete a 1-3 year fellowship involving additional training. A physician then needs to obtain a license from the state in which they plan to practice. In Missouri the Missouri State Board of Healing Arts licenses physicians under the Missouri Code of State Regulations, 20 CSR 2150-2.^{4, 17, 21}

In addition, physicians may choose to become board certified by one of the 24 member boards that make up the American Board of Medical Specialties (ABMS). This optional certification is not required for licensure, but does require additional testing and the ability to meet additional standards beyond those required by licensing bodies.³

In the State of Missouri there are currently four allopathic and two osteopathic medical schools:^{2, 6}

- A.T. Still University of Health Sciences-Kirksville College of Osteopathic Medicine
- Kansas City University of Medicine and Biosciences (Osteopathic)
- St. Louis University- School of Medicine
- University of Missouri-Columbia School of Medicine
- University of Missouri-Kansas City School of Medicine
- Washington University School of Medicine-St. Louis

Data related to application, enrollment, race/ethnicity, and gender from the American Association of Colleges of Osteopathic Medicine (AACOM) and the Association of American Medical Colleges (AAMC) have been compiled into two separate sections for all six Missouri schools. Note, due to the fact that two separate data sources were utilized to gather information, different material is available for each degree.

Education for MDs

The percent of in-state and out-of-state applicants and matriculants (enrolled students) for the four allopathic schools are listed in Figure 2. There are a significantly higher percentage of in-state applicants and matriculants

compared to out-of-state applicants and matriculants for The University of Missouri-Columbia and University of Missouri-Kansas City (public schools).⁶

***Figure 2. In-State/Out-of-State Applicants and Matriculants for Missouri Medical Schools, 2015-2016⁶**

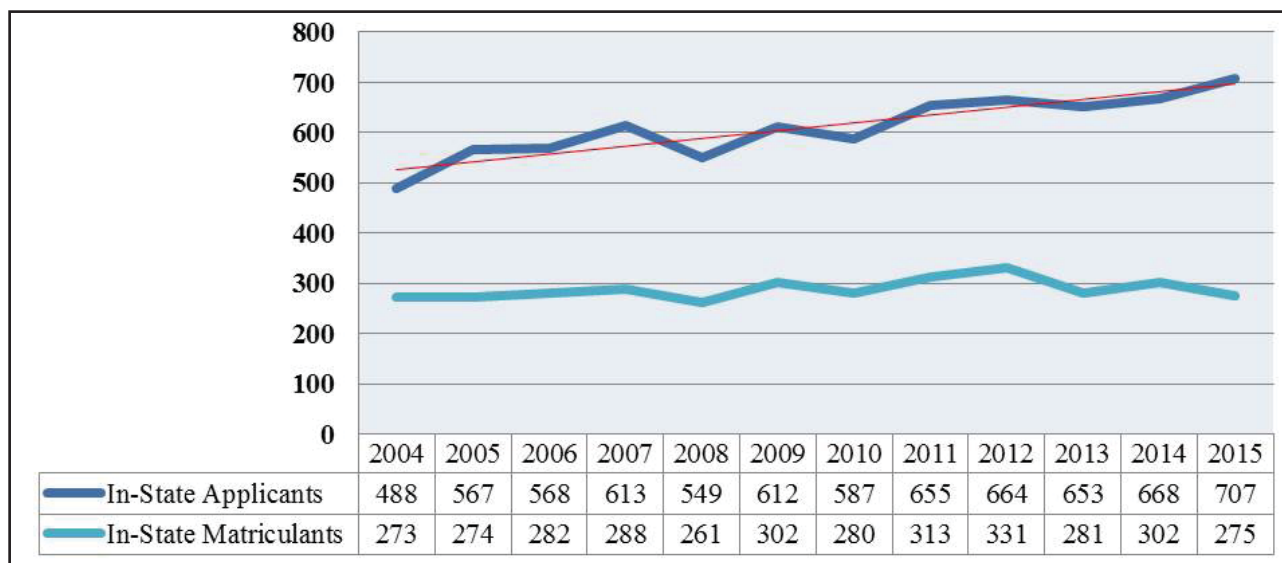
Institution	Total Number of Applications	In-State Applications	Out-of-State Applicants	Total Matriculants	In-State Matriculants	Out-of-State Matriculants
University of Missouri-Columbia	1,977	27.9%	72.1%	104	76%	24%
University of Missouri-Kansas City	1,902	12.1%	87.9%	106	58.5%	41.5%
St. Louis University	8,518	5.5%	94.5%	181	16%	84%
Washington University	4,186	4.8%	95.2%	123	8.1%	91.9%

Additionally, at both St. Louis University and Washington University (private schools), the percentage of in-state matriculants is more than triple the percentage of in-state applicants.

The number of applicants by the state of their legal residence has increased slightly in recent years. There was a 2.3% increase in Missouri applicants between the years 2013 and 2014. The number of matriculants increased

by 7.5% between 2013 and 2014, after a minor decrease between years 2012 and 2013.⁶ The trends of the number of in-state applicants and matriculants between the years 2004 and 2015 in Missouri are highlighted in Figure 3. The number of in-state applicants has been on an overall incline since 2004 as depicted by the red trend line.

Figure 3. Number Applicants and Matriculants from Missouri to US Medical Schools, 2004-2014⁶



**Applicants may have applied to more than one Missouri school, resulting in discrepancies of total applicant numbers in Figures 2 and 3.*

The division of gender for applicants and matriculants is listed in Figure 4.⁶ Nationally, the amount of women applying and attending allopathic medical school has been on a steady incline since 1977. In 1982-1983, 26.8% of MD degrees were awarded to women. In 2010-2011,

female students received 48.4% of the MD's awarded, representing the largest number of women earning an MD of any national graduating class to date.⁶

Figure 4. Percent of Gender Specific Applicants and Matriculants for 4 Missouri Allopathic Schools, 2014-2015⁶

Institution	Total Number of Applications	Percent Women	Percent Men	Total Matriculants	Percent Women	Percent Men
University of Missouri-Columbia	1,713	44%	56%	104	44.2%	55.8%
University of Missouri-Kansas City	1,266	44.3%	55.7%	121	55.4%	44.6%
St. Louis University	7,267	43%	57%	180	52.8%	47.2%
Washington University	4,367	42.5%	57.5%	123	50.4%	49.6%

Enrollment for all four of the Missouri Allopathic schools has increased over the years. Figure 5 shows the total enrollment from years 2006-2015 and Figure 6 displays enrollment by gender for each institution. St. Louis University has consistently had the highest number of

enrolled students (Figure 5) with men having higher enrollment numbers than women (Figure 6). The University of Missouri-Kansas City has had consistently higher enrollment of women than men; the only of the four universities to portray this pattern.

Figure 5. Enrollment for Missouri Allopathic Schools, 2006-2015⁶

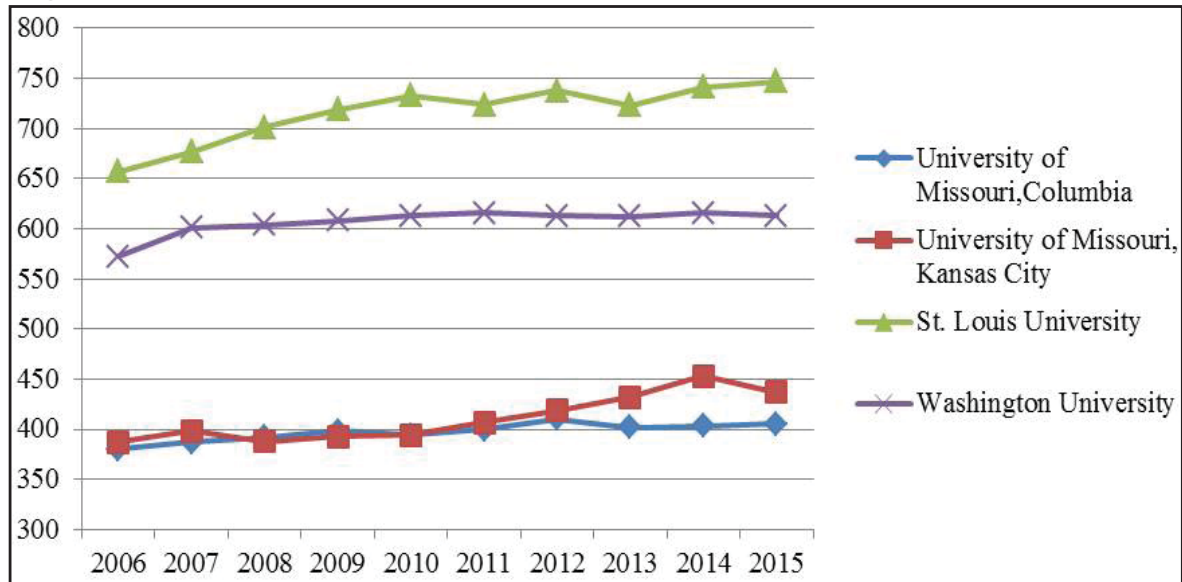
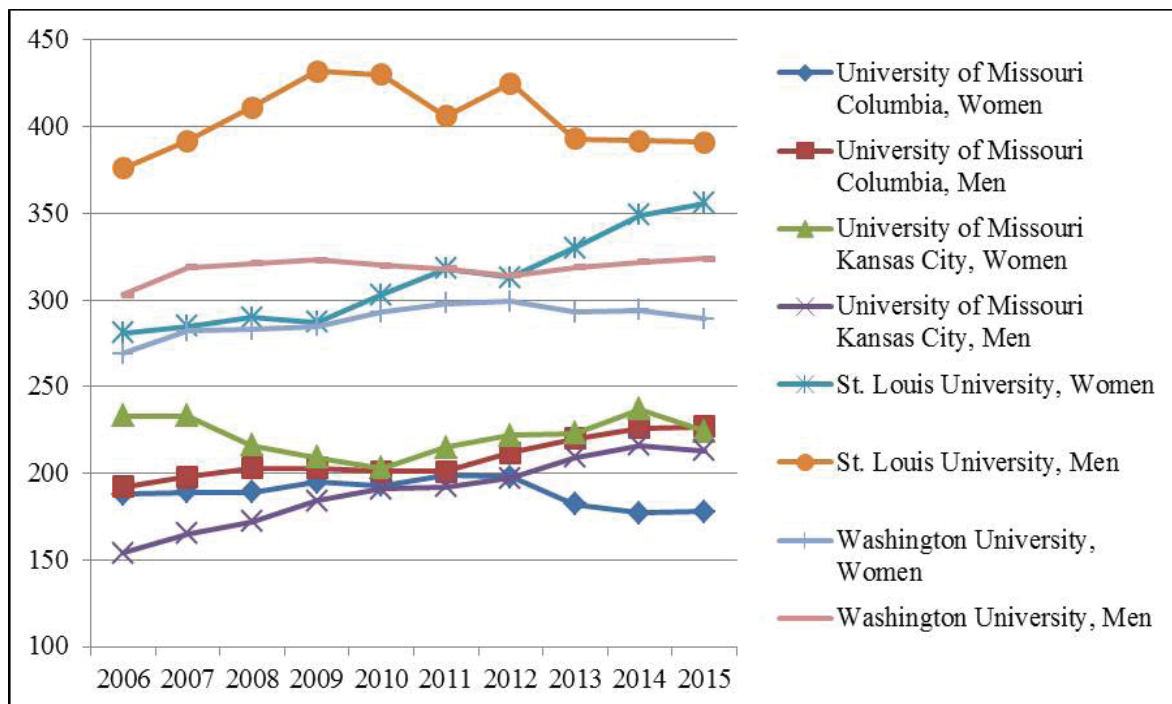


Figure 6. Enrollment for Missouri Allopathic Schools by Gender, 2006-2015⁶



Tuition for MDs

Tuition for all four of the Missouri allopathic medical schools has been on a steady incline since the 1996-1997 school years (first year of available data). Tuition for non-residents is approximately double the tuition for residents at both public institutions, University of Missouri-Columbia and University of Missouri-Kansas City. Tuition is the same amount for both resident and non-resident students at the private institutions, St. Louis University and Washington University.⁶

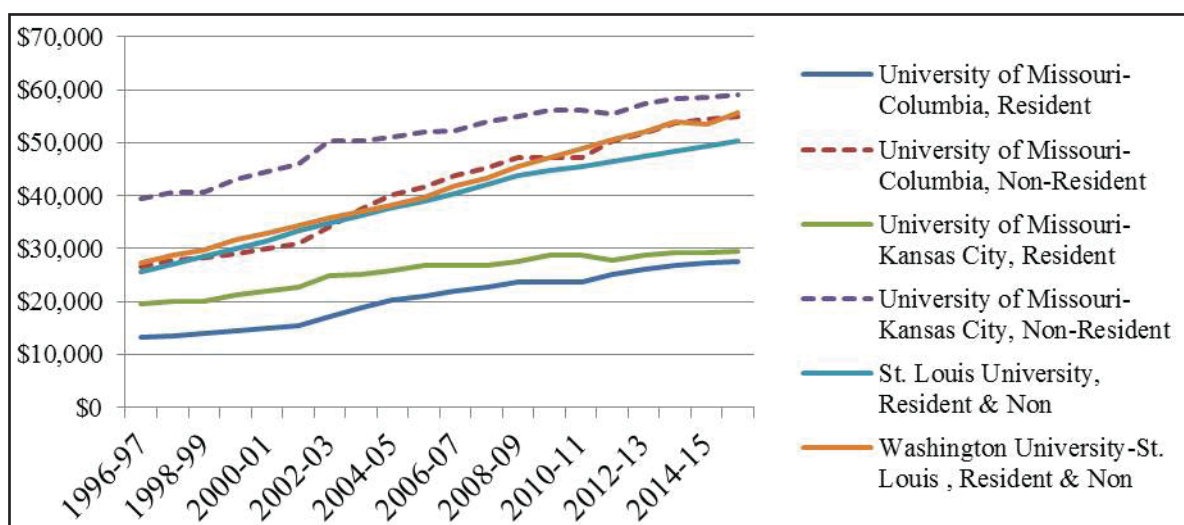
Figures 7 and 8 display tuition rates by school year for all schools from the 1996-1997 school years to the present 2015-2016 school year in both tabular and graph form. The percent changes in tuition cost between school years

1996-1997 and 2015-2016 are listed in the last line of Figure 7. The school years that have the largest increase in tuition cost are highlighted in red with the percent next to the more expensive year. Tuition cost had the most significant increase between school years 2001-2002 and 2002-2003 for the University of Missouri-Columbia and University of Missouri-Kansas City for both residents and non-residents. There was a tuition decrease between the years 2010-2011 and 2011-2012 at the University of Missouri-Kansas City for both residents (4%) and non-residents (1%). There was also a tuition decrease at Washington University between the years 2013-2014 and 2014-2015 (1%).

Figure 7. Tuition Rates for Missouri Medical Schools, 1996-2016⁶

School Year	University of Missouri-Columbia, Resident	University of Missouri-Columbia, Non-Resident	University of Missouri-Kansas City, Resident	University of Missouri-Kansas City, Non-Resident	St. Louis University, Resident & Non-Resident	Washington University, Resident & Non-Resident
96 - 97	\$13,216	\$26,579	\$19,453	\$39,416	\$25,600	\$27,435
97 - 98	\$13,626	\$27,830	\$20,059	\$40,642	\$27,140 6%	\$28,800
98 - 99	\$14,037	\$28,225	\$20,059	\$40,642	\$28,500	\$29,670
99 - 00	\$14,486	\$29,128	\$21,322	\$43,200	\$29,930	\$31,700 6%
00 - 01	\$14,951	\$30,060	\$22,003	\$44,582	\$31,430	\$32,960
01 - 02	\$15,458	\$31,082	\$22,752	\$46,099	\$33,300 6%	\$34,280
02 - 03	\$17,082 9.5%	\$34,016 9%	\$24,986 9%	\$50,297 8%	\$34,800	\$35,780
03 - 04	\$18,792	\$37,418	\$25,094	\$50,405	\$36,190	\$37,032
04 - 05	\$20,203	\$40,226	\$25,845	\$51,158	\$37,640	\$38,330
05 - 06	\$20,909	\$41,634	\$26,817	\$52,060	\$38,960	\$39,720
06 - 07	\$21,953	\$43,715	\$26,933	\$52,229	\$40,520	\$41,910
07 - 08	\$22,788	\$45,374	\$26,933	\$53,866	\$42,140	\$43,380
08 - 09	\$23,724	\$47,236	\$27,470	\$54,939	\$43,830	\$45,550
09 - 10	\$23,724	\$47,236	\$28,810	\$56,279	\$44,710	\$47,150
10 - 11	\$23,724	\$47,236	\$28,810	\$56,279	\$45,600	\$48,800
11 - 12	\$25,265	\$50,307	\$27,780	\$55,559	\$46,510	\$50,510
12 - 13	\$26,022	\$51,812	\$28,719	\$57,438	\$47,440	\$52,020
13 - 14	\$26,935	\$53,629	\$29,150	\$58,299	\$48,390	\$54,050
14 - 15	\$27,339	\$54,433	\$29,295	\$58,591	\$49,450	\$53,463
15 - 16	\$27,558	\$54,868	\$29,589	\$59,178	\$50,440	\$55,711
Percent Change	109%	106%	52%	50%	97%	103%

Figure 8. Tuition Rates for Missouri Medical Schools, 1996-2016⁶



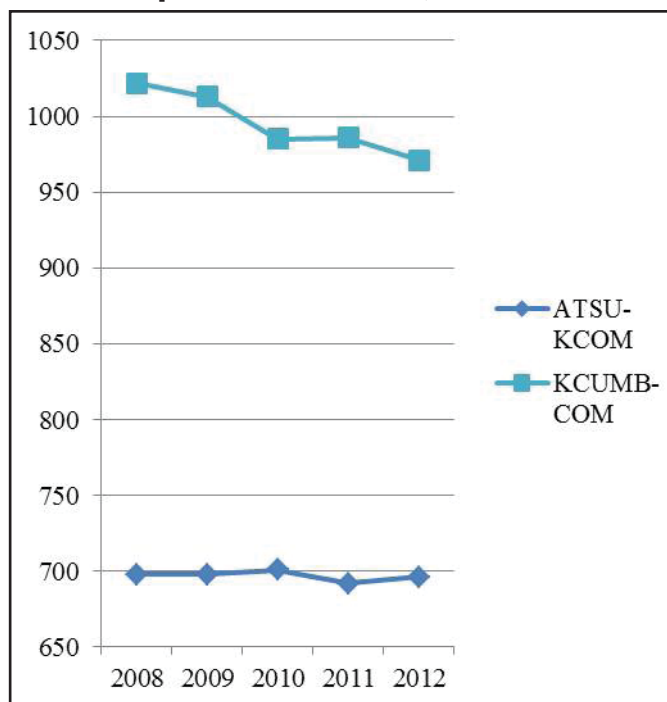
Education for DOs

Nationally, the amount of Osteopathic medical schools and attendees has increased from 14 institutions and 3,926 enrollees in 1997 to 31 institutions at 44 locations and 23,071 enrollees in 2014. Figure 9 shows the enrollment numbers for A.T. Still University-Kirksville College of Osteopathic Medicine (ATSU-KCOM) and Kansas City University of Medicine and Bioscience College of Osteopathic Medicine (KCUMB-COM) between 2008 and 2012.²

The number of 2014-2015 school year enrollees by gender and self-reported race/ethnicity for schools nation-wide and for Missouri's two osteopathic schools are listed in Figures 10, 11 and 12. Asian and Caucasian students are listed as the largest enrolled demographics at both the national and state levels.²

In 2009-2010 Missouri had second the highest number of osteopathic medical school graduates (404), next only to Pennsylvania with 450 graduates. Florida was third with 357 osteopathic medical student graduates.² As of May 1, 2015; 5,229 osteopathic residents were matched, compared with 31 who were not matched.²

Figure 9. Enrolment for Missouri Osteopathic Schools, 2008-2012²



**Figure 10. National Gender and Race/Ethnicity Enrollment
for Osteopathic Colleges, 2014-15²**

Nationally	Male	Female	Total
Total	13,661 (56%)	10,903 (44%)	24,564
Hispanic/Latino	573 (4%)	498 (4%)	1,062 (4%)
White, non-Hispanic	9,174 (67%)	6,799 (62%)	15,973 (65%)
American Indian/Alaska Native, non-Hispanic	66 (0.5%)	43 (0.4%)	109 (0.4%)
Black/African American, non-Hispanic	298 (2%)	415 (4%)	713 (3%)
Asian, non-Hispanic	2,626 (19%)	2,321 (21%)	4,947 (20%)
Pacific Islander, non-Hispanic	10 (0.07%)	18 (0.2%)	28 (0.1%)
Two or more races, non-Hispanic	346 (3%)	321 (3%)	667 (3%)
Unkown	406 (3%)	355 (3%)	761 (3%)
Nonresident alien	162 (1%)	142 (1%)	304 (1%)

**Figure 11. ATSU-KCOM Gender and Race/Ethnicity Enrollment
for Osteopathic Colleges, 2014-15²**

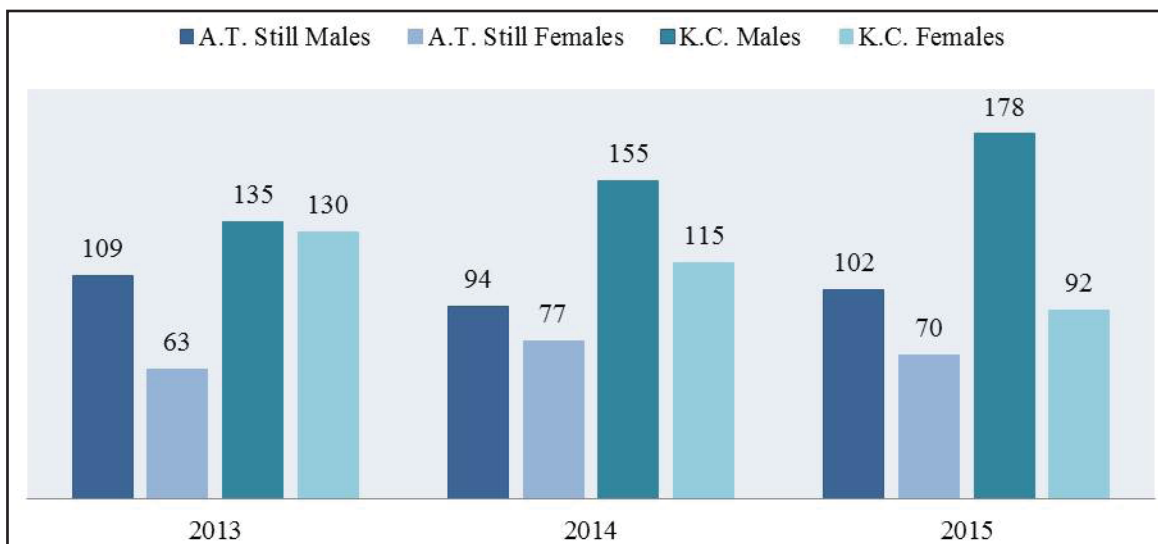
A.T. Still University - Kirksville College of Osteopathic Medicine	Male	Female	Total
Total	397 (57%)	296 (43%)	693
Hispanic/Latino	14 (4%)	16 (5%)	30 (4.3%)
White, non-Hispanic	332 (84%)	213 (72%)	545 (79%)
American Indian/Alaska Native, non Hispanic	1 (0.3%)	1 (0.3%)	2 (0.3%)
Black/African American, non-Hispanic	5 (1%)	9 (3%)	14 (2%)
Asian, non-Hispanic	29 (7%)	25 (8%)	54 (8%)
Pacific Islander, non-Hispanic	0	0	0
Two or more races, non-Hispanic	2 (.5%)	19 (6%)	21 (3%)
Unkown	9 (2%)	21 (4%)	21 (2%)
Nonresident alien	5 (1%)	1 (0.3%)	6 (0.9%)

**Figure 12. KCUMB-COM Gender and Race/Ethnicity Enrollment
for Osteopathic Colleges, 2014-15²**

Kansas City University of Medicine and Bioscience College of Osteopathic Medicine	Male	Female	Total
Total	580 (57%)	442 (43%)	1,022
Hispanic/Latino	11 (2%)	7 (2%)	18 (2%)
White, non-Hispanic	437 (75%)	317 (72%)	754 (74%)
American Indian/Alaska Native, non-Hispanic	2 (0.3%)	3 (0.7%)	5 (0.5%)
Black/African American, non-Hispanic	2 (0.5%)	5 (1%)	8 (0.8%)
Asian, non-Hispanic	108 (19%)	94 (21%)	202 (20%)
Pacific Islander, non-Hispanic	1 (0.2%)	0	0
Two or more races, non-Hispanic	1 (0.2%)	2 (0.5%)	3 (0.3%)
Unkown	17 (3%)	14 (3%)	31 (3%)
Nonresident alien	0	0	0

The fluctuation of new male and female matriculants for both institutions between 2013 and 2015 is listed in Figure 13. Attendance for Kansas City University of Medicine and Bioscience College of Osteopathic Medicine males has increased since 2013, as the attendance for females has decreased.²

Figure 13. Gender Specific Attendance for 2 Missouri Osteopathic Schools, 2013-2015²

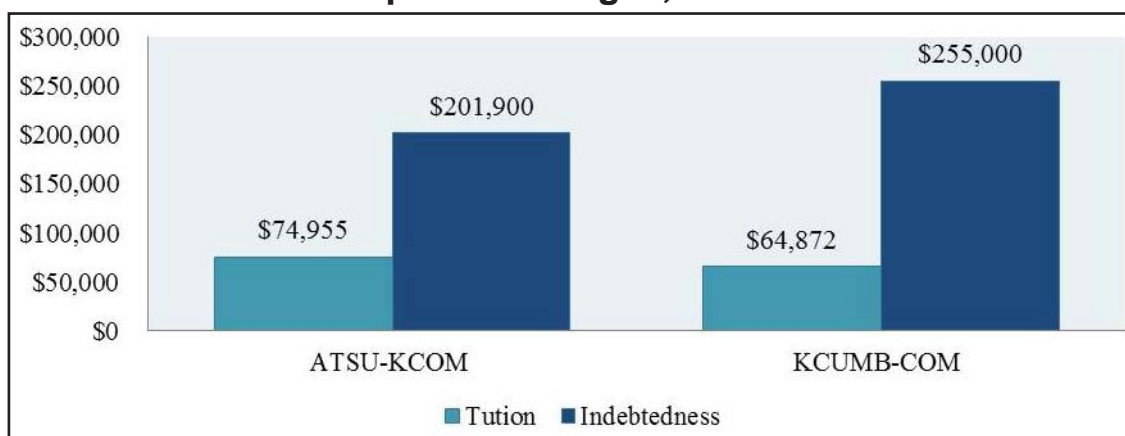


Tuition for DOs

Both ATSU-KCOM and KCUMB-COM are private institutions. Nationally, tuition cost at the 25 private osteopathic colleges (2015-2016 school year mean tuition, \$46,214) is higher than the six publically run Osteopathic universities (2015-2016 school year mean tuition, \$28,103).² The 2012-2013 cost of attendance for ATSU-KCOM was \$74,955 for both resident and non-resident students, with an average graduate indebtedness

of \$201,900. The 2012-2013 tuition cost for KCUMB-COM was approximately \$10,000 less at \$64,872 for both resident and non-resident students with an average graduate indebtedness of \$255,000 (Figure 14).² The varied indebtedness may be due to scholarship and financial aid differences as opposed to tuition costs. Data on years prior to 2012 were not available.

Figure 14. Tuition and Indebtedness for both Missouri Osteopathic Colleges, 2012-2013²



Residents

Resident physicians in Missouri are certified under the Accreditation Council for Graduate Medical Education (ACGME). To achieve residency status, medical education graduates must go through an extensive matching process which utilizes an applicant-proposing algorithm to produce the best result for the applicant.¹

The National Resident Matching Program found that the majority of graduates listed certain top criteria when making match selections and ranking those selections. Although data was not available on the correlation of resident home state with resident matching state, certain top criteria may have been chosen in an attempt to be matched at the state in which residents are originally from.²⁰

Medical school seniors chose geographic location as the highest rated criteria when selecting hospitals to match at 87%. The average ranking of importance for geographic location on a scale of 1-5, with 1 being not important at all and 5 being extremely important, was a 4.5. Having a support network in the area was listed at 53% importance with a ranking of 4.2. Independent applicants also listed

geographic location with the highest importance at 87% with a 4.2 ranking; and listed having a support network in the area at 32% with an importance ranking of 4.1. Ranking criteria had similar scores. Senior medical students scored geographic location as the third most important factor at 80% with a 4.5 importance ranking. Support network came in at 47%, and ranked a 4.3. Independent applicants also ranked geographic location third with 58% and a ranking of 4.2. Having a close support network scored 27% at a 4.2 ranking.²⁰

Figure 15 displays the 2015-2016 national numbers of residency program applicants by sex for the specialties highlighted in this assessment. Internal Medicine consistently has higher numbers of residency applications compared to the other specialties.²⁰

Figure 16 shows the number of residents that matched per specialty for the year of 2015 in Missouri. The number of positions available was equal to the number of positions filled for all but two of the specialties. Family Medicine had 62 vacant positions and Internal Medicine had 185 open positions.²⁰

Figure 15. National Residency Program Applicants by Gender and Specialty, 2015-2016²⁰

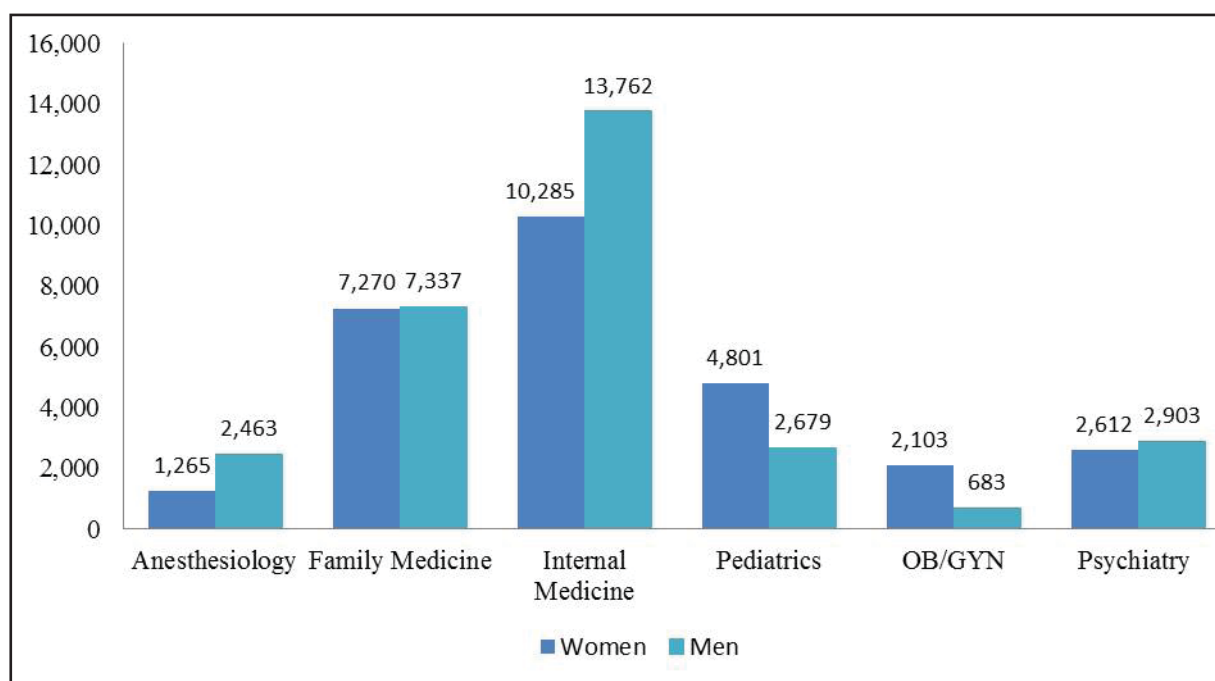
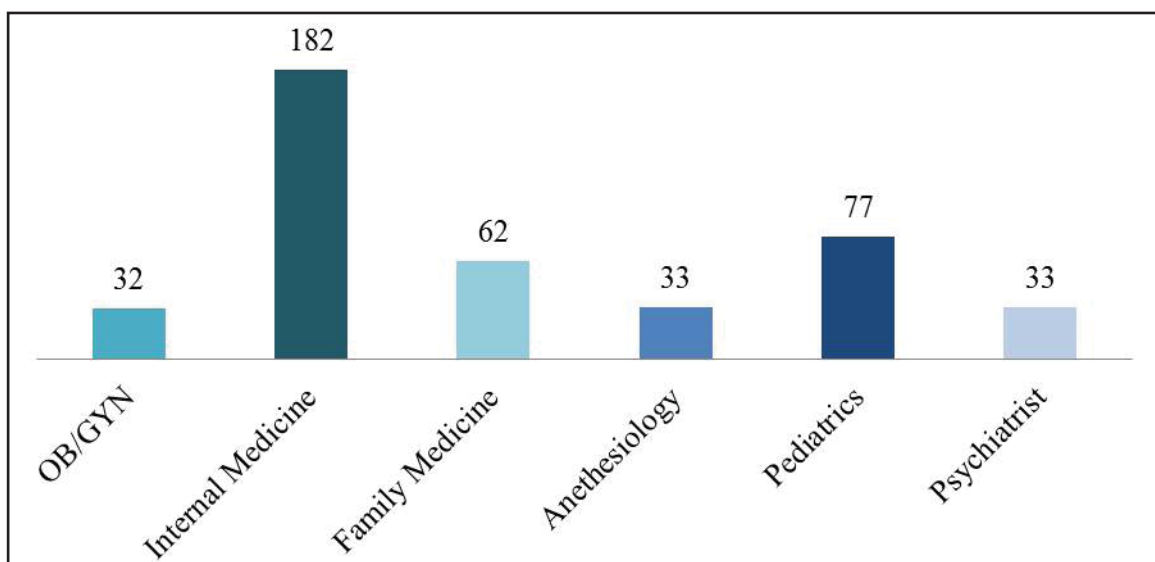


Figure 16. Number of Residents Matched per Specialty in Missouri, 2015²⁰



Physician Workforce

The dynamic nature of physicians results in numerous specialties, geographic distribution, industry profiles, wages and an abundant amount of other variations. The following section of this analysis serves to provide a baseline assessment of Missouri's physician workforce by providing basic information related to six of the most common physician specialties, as well as physicians and surgeons in general. Additionally, due to the use of two dynamic data sets from the Missouri Board of Registration for the Healing Arts and the Missouri Healthcare Workforce Registry and Exchange (MoHWoRx), discrepancies in total numbers may occur.

Geographical Distribution

Out of the 28,085 physicians who received a license in Missouri, 22,134 list a current primary Missouri address (this analysis includes medical physicians and surgeons, medical physician/surgeon temporary, osteopathic physicians, and osteopathic physician/surgeon temporary). The physician-to-rural population ratio is 1:364 and the physician-to-urban population ratio is 1:239.¹⁷ Figure 17 displays the physician-to-population ratio for all counties in the state of Missouri. There are 5 counties, all rural, that list only one practicing physician or surgeon of any type. Saint Louis County has the largest population of practicing physicians. Maries County has the lowest physician-to-population ratio at 1:77 and St. Francois has the highest at 1:11,035. The number of physicians per county is displayed on the map in Figure 18.

*Medical and osteopathic physician/surgeon temporary are defined as resident physicians.

*It should be noted that the information in this report was obtained on October 13, 2015 and is current as of that date.

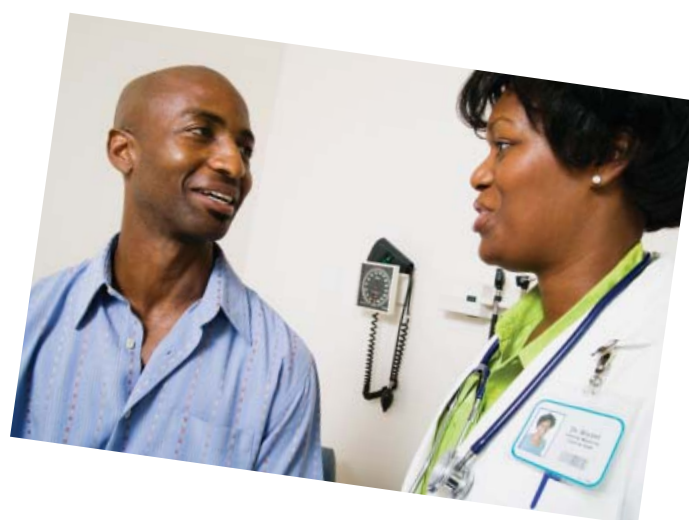


Figure 17. Physician-to-Population Ratio Map for Missouri Counties

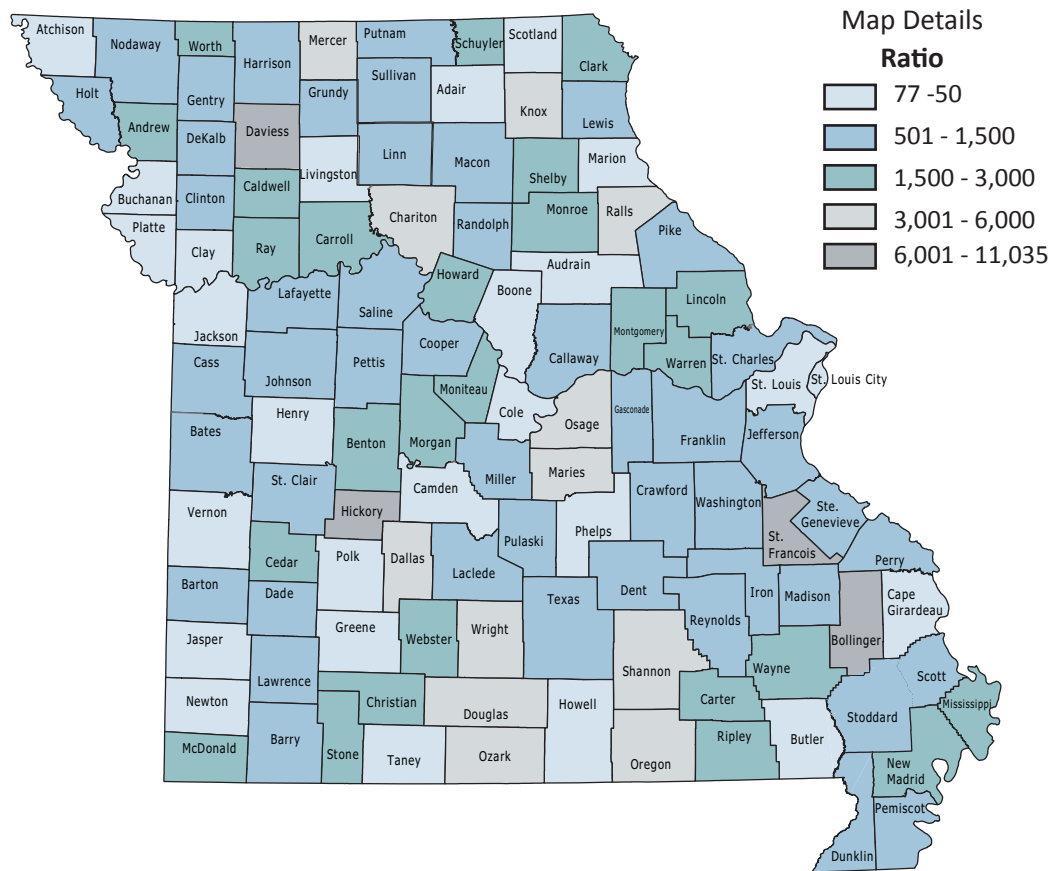
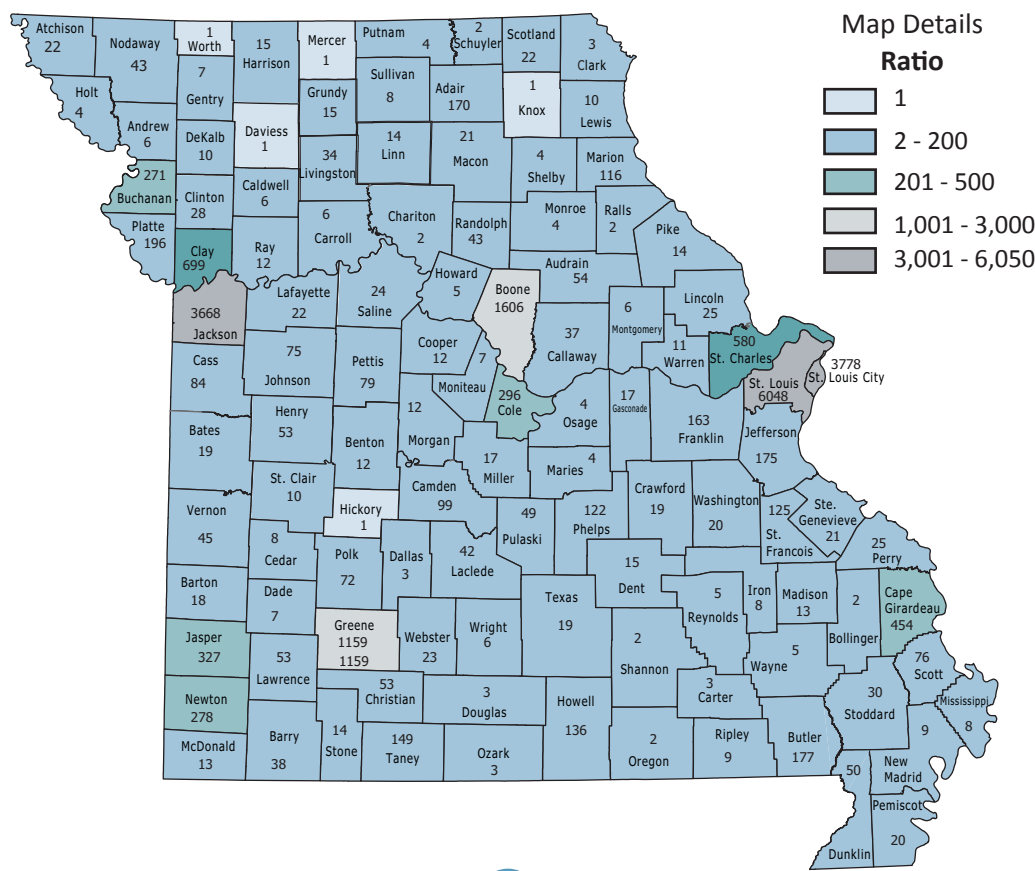


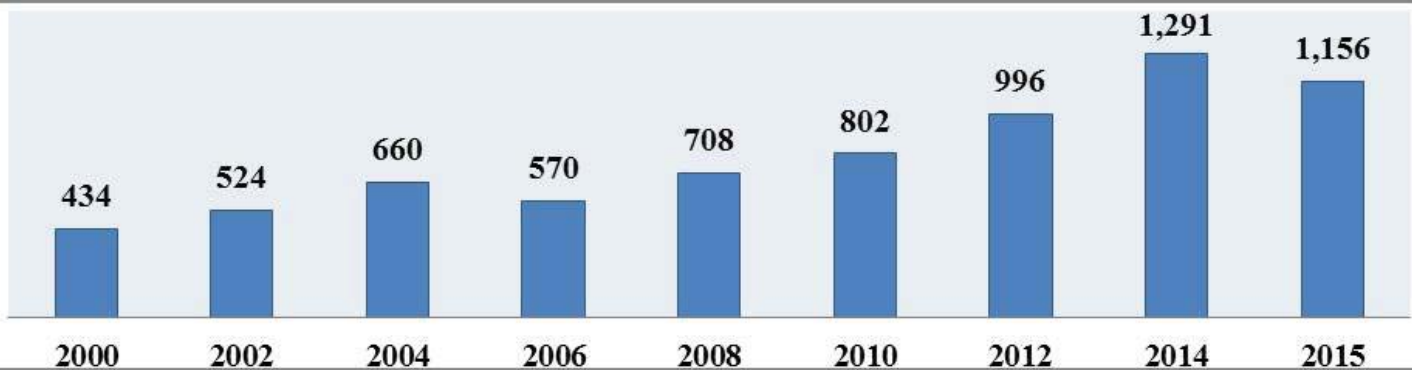
Figure 18. Geographical Distribution of Physicians per Missouri County¹⁷



With the exception of a slight decline in 2006, the number of new licensees per year continues to increase.

As of October 8, 2015, there were 1,156 new Missouri licensees. (Figure 19).¹⁸

Figure 19. Number of new Missouri Physician Licensees per year, 2000-2015¹⁸



Of the physicians who were licensed in Missouri, 5,951 currently list a primary address outside of the state. All 50 states are represented as well as 14 other countries. The states with the highest number of Missouri licensed

physicians are listed in Figure 20. Ten Missouri licensees list Puerto Rico as the primary address, the highest of any countries other than America.¹⁹

Figure 20. Top Locations with Missouri Licensees¹⁹

Primary Address	Number of Physicians	Percent of Physicians
Tennessee	234	4%
California	346	6%
Florida	385	6%
Texas	470	8%
Illinois	649	11%
Kansas	804	14%
Other Country	64	1%



Race

Figure 21 compares the self-reported race groups in Missouri for the specialties highlighted in this assessment. The race classifications have been divided according to United States Census standards.²¹ Verbiage in the MoHWoRx database is classified differently e.g. individuals defined as Filipino, Chinese, Japanese and Korean are listed independently in MoHWoRx; these

have been combined under the Asian Alone group for this assessment. *Many of the licensees in MoHWoRx self-reported being Asian-Indian. Such numbers were of enough significance to categorize in their own section, although this is not defined as one of the U.S. census race groups. **The percent represents percent of the total number of physicians in highlighted specialties (10,026).¹⁹

Figure 21. Number of Employees Divided by Race and Specialty in Missouri, 2015¹⁹

Race	Family	Pediatric	General Internist	OB/GYN	Psychiatrist	Anesthesiologist	Total for MO	**Percent
Black or African American	84	64	157	41	46	34	426	4%
American Indian & Alaskan Native	5	3	20	1	0	1	32	0.3%
Asian Alone	97	88	376	32	86	73	752	7.5%
Native Hawaiian & Other Pacific Islander	4	2	9	1	2	0	18	0.2%
Two or More Races	78	62	241	22	61	32	496	5%
White alone, not Hispanic or Latino	1,994	1,264	2,162	692	478	748	7,338	73%
*Asian Indian	86	105	518	32	155	68	964	10%

Wages

Overall, wages for physicians and surgeons are among the highest of all occupations. Nationally, the 2012 annual median wage for a practicing primary care physician was \$220,942. The median annual wage for physicians practicing medical specialties was significantly higher at \$396,233. Compensation varies among the different practices.¹⁵ As of May 2014, the annual median wage for physicians and surgeons in Missouri was \$197,280;

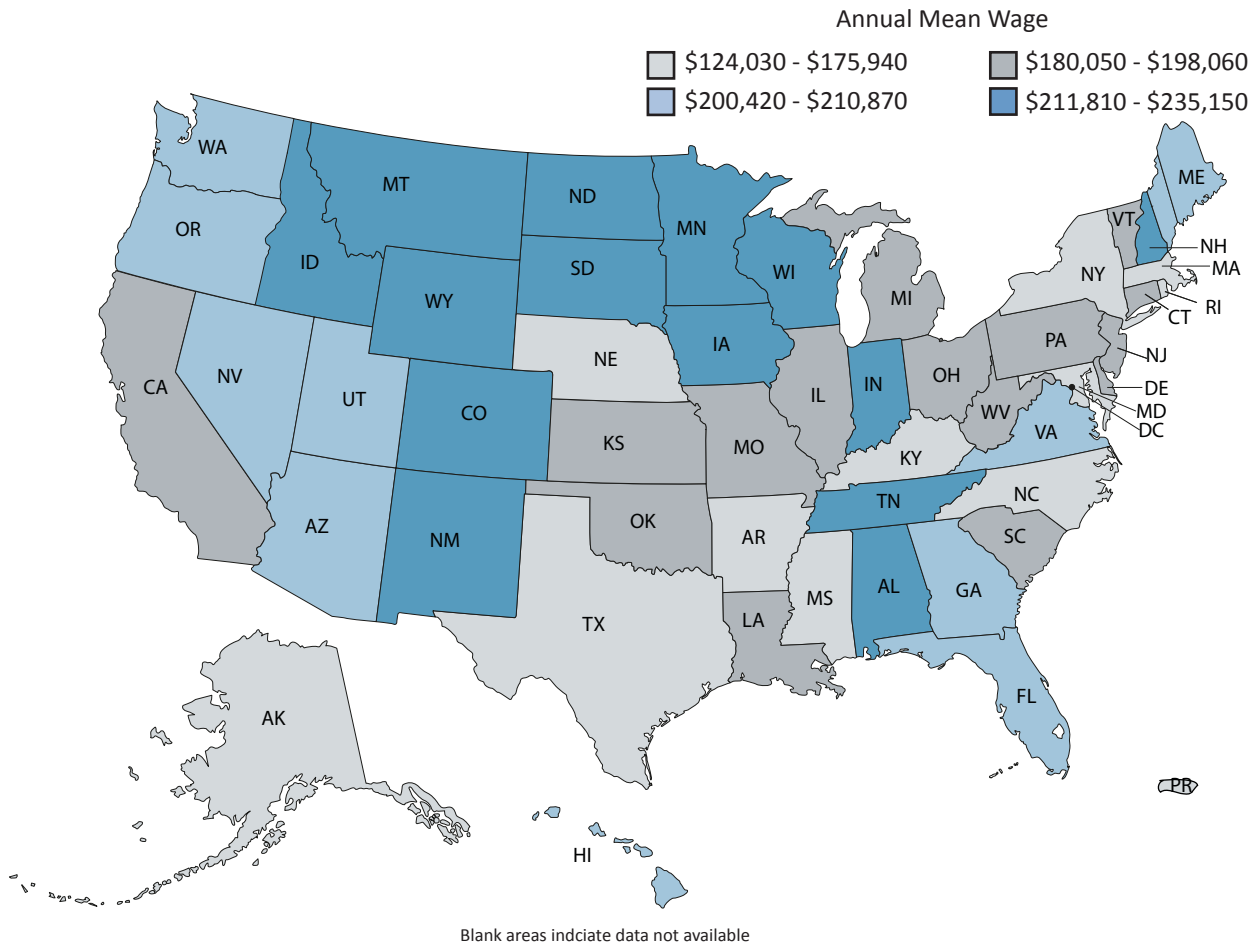
lower than the national wage.¹⁵ In fact, of seven of the most common types of physicians, only internal medicine physicians in Missouri have a comparable annual wage to national compensation (Figure 22). The national annual wage for anesthesiologists is nearly double Missouri's wage.¹⁴ Figure 23 displays a map of the geographical distribution of the annual mean wage per state for physicians and surgeons.¹²

Figure 22. Comparison of the Missouri and National Annual Median Wages per Specialty¹⁴



Figure 23. Bureau of Labor Statistics¹²

Annual mean wage of physicians and surgeons, all other, by state. May 2014



Employment

The level of employment varies per industry nationwide.

The top five industries of employment are listed in Figure 24

with Offices of Physicians being the lead employer as well as the highest paying industry of those listed.¹²

Figure 24. National Physician Industry Employment and Wage Profile¹²

Industry	Employment	Hourly mean wage	Annual mean wage
Offices of Physicians	140,920	\$107.49	\$223,580
General Medical and Surgical Hospitals	97,820	\$69.65	\$144,870
Federal Executive Branch (OES Designation)	31,990	\$95.16	\$197,930
Colleges, Universities and Professional Schools	9,840	\$51.33	\$106,760

Available data on primary settings for Missouri licensees are listed in Figure 25. Hospitals and private offices

employ the highest number of physicians with significantly higher numbers than all other areas.¹⁹

Figure 25. Number of Practicing Missouri Physicians per Primary Setting¹⁹

Primary Setting	Number of Practicing Physicians	Percent of Practicing Physicians
Hospital	7,350	33%
Private Office	7,160	32%
School of Medicine	1,341	6%
Community Health Center	763	3%
Military/Federal Facility	299	1%
University/College	145	0.7%
Correctional Facility	139	0.6%
Nursing Home/Long Term Care Facility	110	0.5%
Free Clinic	86	0.4%
Group Health Plan (HMO)	76	0.3%
Palliative/Hospice	58	0.3%
Public Health	35	0.2%

Figure 26. Number of Practicing Missouri Physicians per Primary Specialty¹⁹

Medical Specialty Group	Primary Specialty
Internal Medicine	3,483
Family/General Medicine	2,348
Pediatrics	1,588
Emergency Medicine	966
Anesthesiology	958
Radiology	858
General Surgery	853
Psychiatry	828
Obstetrics/Gynecology	819
Cardiology	568
Orthopedic	456
Ophthalmology	392
Neurology	385
Oncology	264
Otolaryngology	252
Urology	220
Dermatology	218
Physical Medicine/Rehab	171
Plastic Surgery	146
Neurological Surgery	144
Endocrinology	95
Allergy/Immunology	81
Geriatrics	26
Medical Genetics	11

The number of Missouri licensees by reported primary specialty group is displayed in Figure 26. Internal medicine is the most common primary medical specialty in Missouri.¹⁹



Family and General Physicians

Family and general physicians commonly have regular, long-term patients. Their job duties involve assessment, treatment and prevention of a range of conditions and injuries that occur in everyday life for the general population.¹⁵

As of October 13, 2015, there were 2,348 family and general physicians practicing in Missouri. Every Missouri county is listed as having at least one family/general

physician. The counties with the lowest number of family/general physicians are Bollinger, Daviess, Hickory, Holt, Knox, Mercer, Oregon, Ralls, Worth and Shelby. All 10 of these counties list one practicing physician and all are defined as rural. The top five counties with the highest level of employment for family/general physicians are all urban. They include Clay, Boone, Greene, Jackson and St. Louis County (Figure 27).¹⁹

Figure 27. Missouri Counties with the Highest Number of Practicing Family & General Physicians¹⁹

County	Number of Practicing Family and General Physicians
St. Louis County	320
Jackson	293
Greene	138
Boone	126
Clay	99

The national median annual wage for this specialty is \$180,180. The Missouri mean annual wage is \$149,320. Figure 28 shows the percentile break down of the Missouri and national annual wage as of May 2014. Figure

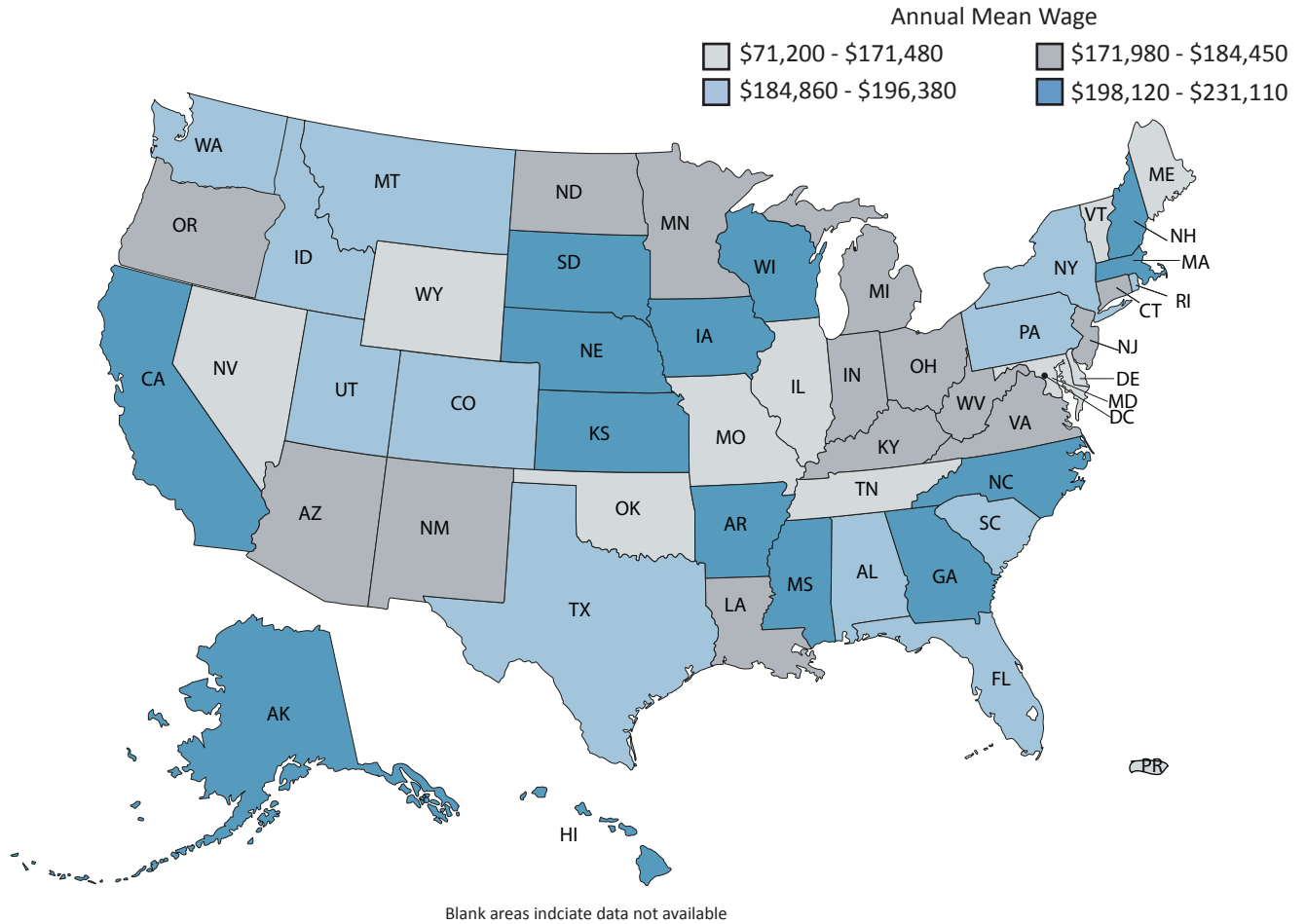
29 displays the annual mean wage of family and general practitioners per state.⁸ The annual wages for Missouri and the nation in both the 75th and 90th percentile are greater than or equal to \$187,999 ($\geq \$187,999$).⁸

Figure 28. Comparison of the Missouri and National Annual Wage Percentiles for Family & General Practitioners⁸

Percentile	10%	50% (Median)	90%
Missouri Annual Wage	\$51,960	\$149,320	$\geq \$187,999$
National Annual Wage	\$72,190	\$180,180	$\geq \$187,999$

Figure 29. Bureau of Labor Statistics⁸

Annual mean wage of family and general practioners, by state. May 2014



The industry profile for Family and General Physicians is displayed in Figure 30. In coordination with the Physicians

and Surgeons industry profile, Offices of Physicians is listed as the top employer at 3.38% of industry employment.⁸

Figure 30. National Family and General Physician Industry Employment and Wage Profile⁸

Industry	Employment	Hourly Mean Wage	Annual Mean Wage
Offices of Physicians	82,980	\$92.87	\$193,170
General Medical and Surgical Hospitals	22,730	\$84.96	\$176,720
Outpatient Care Centers	6,850	\$93.32	\$194,110
Colleges, Universities and Professional Schools	4,020	\$47.74	\$99,300
Local Government (OES Designation)	1,690	\$81.27	\$169,030

General Pediatricians

The duties of a general pediatrician include diagnosis, treatment and prevention of disease and illness for infants, children, teenagers and young adults.¹⁵ As of October 13, 2015, there were 1,588 practicing pediatricians listed in Missouri. Sixty-seven Missouri

counties do not have a pediatrician, all rural counties. The counties with the five largest populations of physicians are St. Charles, Boone, St. Louis County, St. Louis City and Jackson, all of which are urban counties (Figure 31).¹⁹

Figure 31. Missouri Counties with the Highest Number of Practicing General Pediatricians¹⁹

County	Number of Practicing Pediatricians
Jackson	446
St. Louis City	346
St. Louis County	329
Boone	93
St. Charles	63



The median annual wage nationally for general pediatricians is \$163,350. The median annual wage for Missouri is slightly higher at \$181,270. The mean wage per year for the state is \$178,800. Figure 32 portrays the

annual mean wage for pediatricians by state. Missouri is listed in the second highest income group. Figure 33 displays a comparison between national and state percentile wages as of May 2014.¹¹

Figure 32. Bureau of Labor Statistics¹¹
Annual mean wage of pediatricians, by state. May 2014

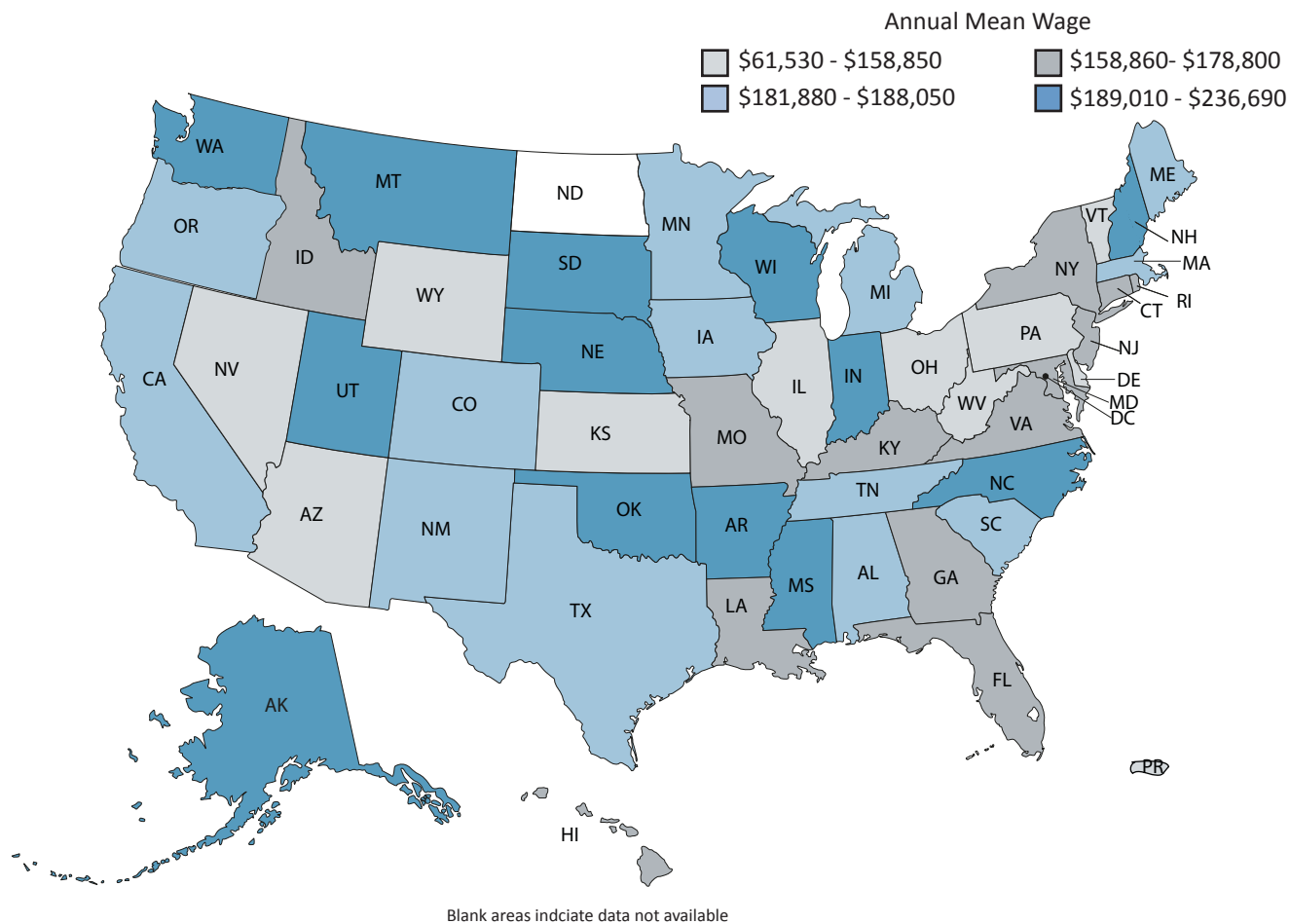


Figure 33. Comparison of the Missouri and National Annual Wage Percentiles for Pediatricians¹⁰

Area Name	Annual 10th Percentile Wage	Annual Median Wage	Annual 90th Percentile Wage
Missouri	\$68,860	\$181,1270	>=\$187,999
Nation	\$93,120	\$163,350	>=\$187,999

Offices of Physicians are once again the top employer at 0.96% of industry employment. Offices of Physicians (\$179,170) are listed as the second highest payer in the top industry employers, following Specialty Hospitals (\$209,140), Figure 34.¹¹

Figure 34. National Pediatrician Industry Employment and Wage Profile¹¹

Industry	Employment	Hourly Mean Wage	Annual Mean Wage
Offices of Physicians	23,590	\$86.14	\$179,170
General Medical and Surgical Hospitals	4,810	\$79.50	\$165,370
Outpatient Care Centers	1,280	\$85.19	\$177,190
Colleges, Universities and Professional Schools	690	\$49.34	\$102,630
Specialty (except Psychiatric and Substance Abuse) Hospitals	330	\$100.55	\$209,140

General Internists

General internists (internal medicine) are physicians who diagnose and provide non-surgical treatment for a range of problems that affect the internal organ systems such as; liver, kidney, stomach and the digestive tract in adult patients.¹⁵

As of October 13, 2015, there were 3,483 General internists listing employment in Missouri. This is the highest number of employment of all the specialties listed. This is due to the fact that internal medicine

doctors have numerous subspecialties including gastroenterology, infectious disease, critical care medicine, nephrology, pulmonary disease, rheumatology, and vascular medicine.¹⁹

There are 37 Missouri counties who do not have a practicing internal medicine physician, all being rural. The counties with the highest number of general Internists are Greene, Boone, St. Louis City, Jackson and St. Louis County, all urban (Figure 35).¹⁹

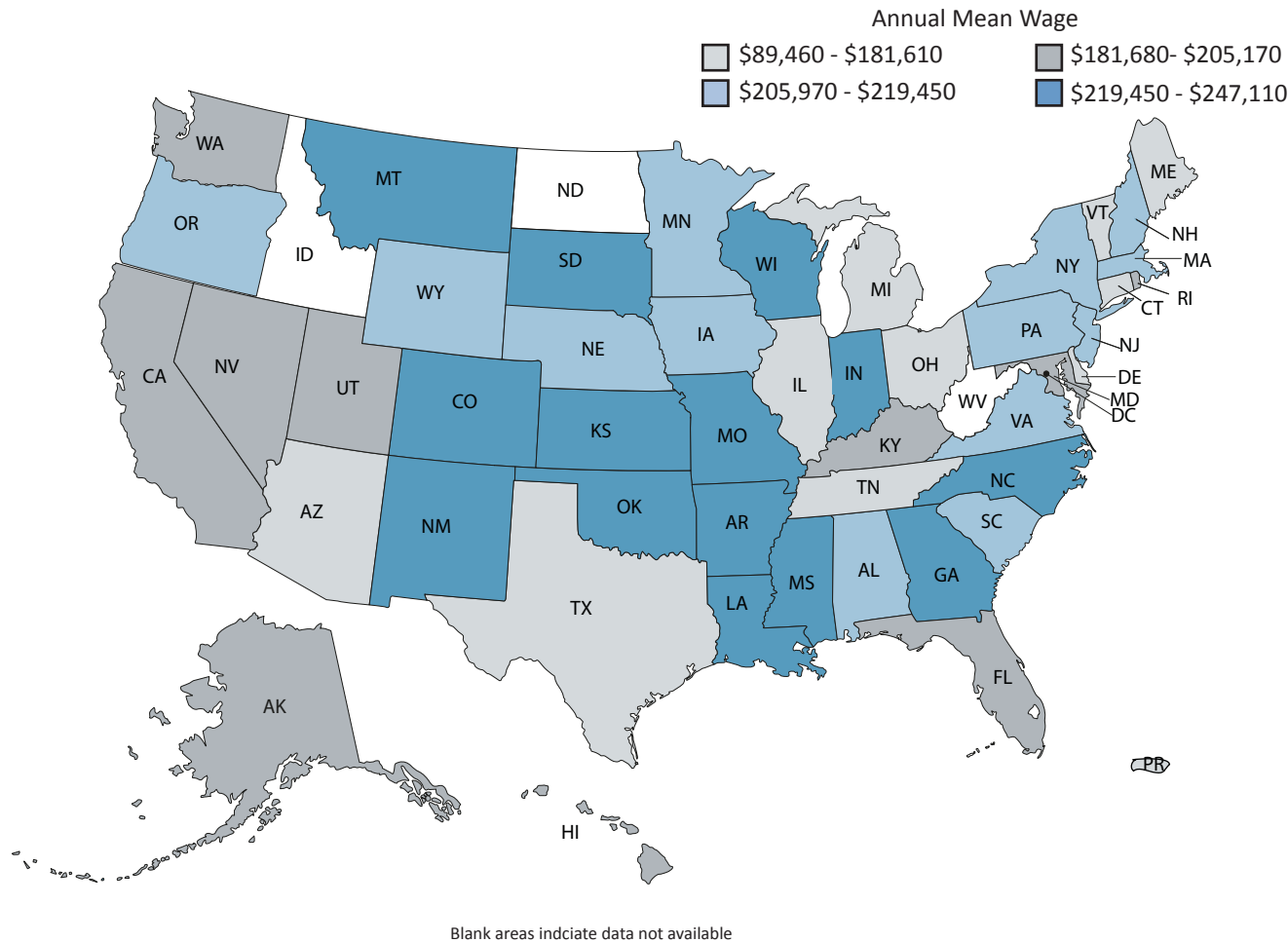
Figure 35. Missouri Counties with the Highest Number of Practicing General Internists¹⁹

County	Number of Practicing General Internists
St. Louis County	1087
Jackson	557
St. Louis City	488
Boone	234
Greene	190

The national median annual wage is equal to or greater than \$187,199 ($\geq 187,999$) according to the Bureau of Labor Statistics. The median wage for Missouri is also listed as $\geq 187,999$ per year. The mean wage per year for

the state is \$246,760. Missouri is listed as the third highest paying state in the nation for this specialty. 9 Figure 36 depicts the annual mean wage per state.

Figure 36. Bureau of Labor Statistics⁹
Annual mean wage of internists, general, by state. May 2014



In conjunction with family physicians and pediatricians, offices of physicians are the highest industry employer at

1.33% (Figure 37). This industry is also the highest payer of the top five employers for general internists.⁹

Figure 37. National General Internists Industry Employment and Wage Profile⁹

Industry	Employment	Hourly Mean Wage	Annual Mean Wage
Offices of Physicians	32,790	\$99.79	\$207,560
General Medical and Surgical Hospitals	11,510	\$72.07	\$149,900
Outpatient Care Centers	1,800	\$94.67	\$196,900
Colleges, Universities and Professional Schools	1,090	\$41.60	\$86,540
Home Health Care Services	210	\$101.62	\$211.360

Obstetricians and Gynecologists (OB/GYNs)

Physicians specializing in this area provide medical care related to pregnancy, childbirth and the female reproductive system. They also diagnose, treat and help prevent diseases affecting women such as cervical cancer, breast cancer, hormonal disorders and symptoms related to menopause.¹⁵

As of October 13, 2015, there were 819 OB/GYN physicians listed as practicing in Missouri. Sixty-four Missouri counties do not have a practicing OB/GYN, all of these being rural counties. The five counties with the highest number of employment in this specialty are Boone, Greene, St. Louis City, Jackson and St. Louis County (Figure 38).¹⁹

Figure 38. Missouri Counties with the Highest Number of Practicing OB/GYNs¹⁹

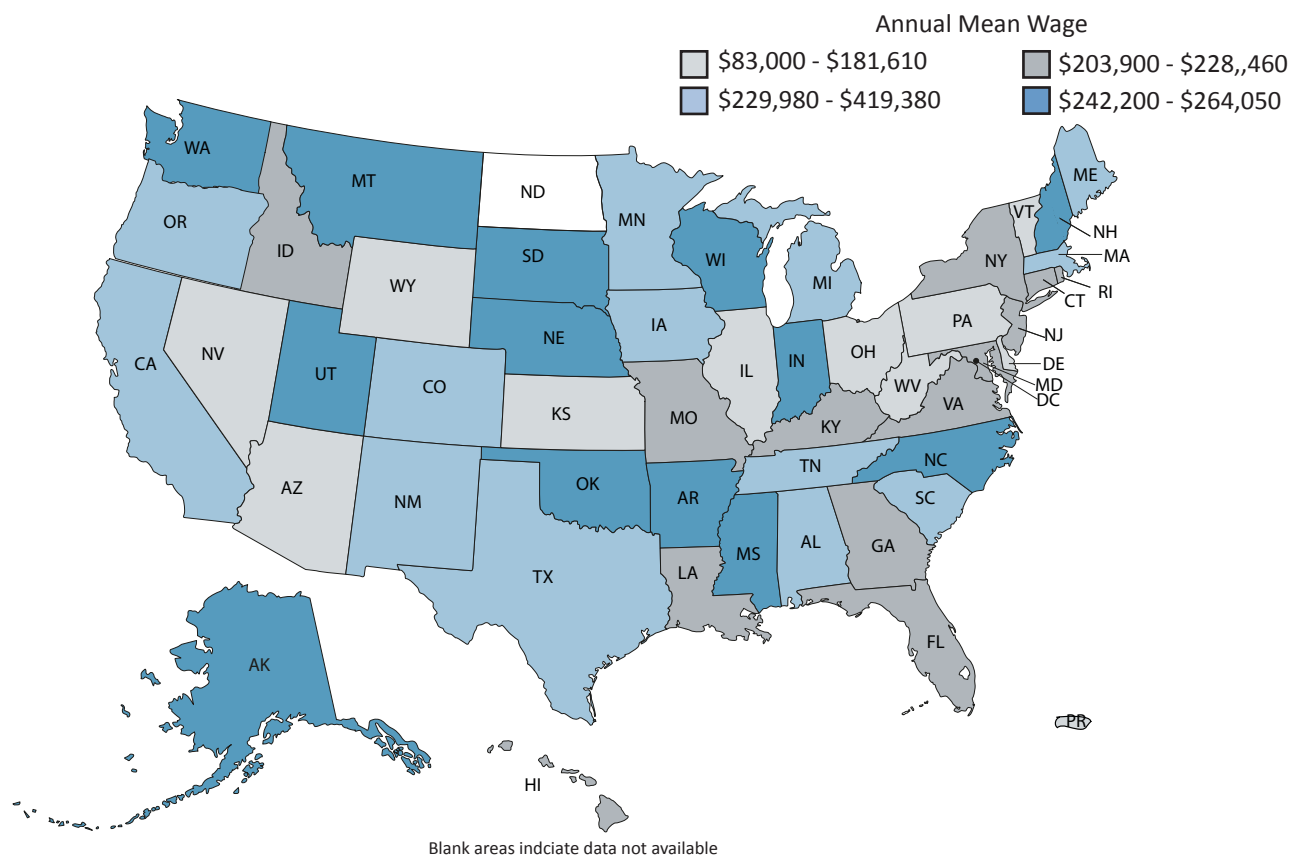
County	Number of Practicing OB/GYNs
St. Louis County	268
Jackson	128
St. Louis City	76
Greene	47
Boone	43

Nationally the annual median wage for OB/GYNs is \geq \$187,999. The median wage for Missouri is also listed as \geq 187,999 per year. The annual 10th percentile wage for Missouri as of May 2014 was 148,130 so it can be assumed that the median wage is significantly higher. The

annual mean wage for the state is \$237,450. 10 Kansas City and St. Louis are listed as having the highest number of employed OB/GYNs.¹⁴ Figure 39 shows the annual mean wage for all the states. Out of the four wage divisions, Missouri is in the third.¹⁰

Figure 39. Bureau of Labor Statistics¹⁰

Annual mean wage of obstetricians and gynecologists, by state. May 2014



The industry with the highest level of employment is the Offices of Physicians at 0.68%. Outpatient Care Centers and Specialty Hospitals employ fewer OB/GYNs, yet have

the two highest wages for this professional group (Figure 40).¹⁰

Figure 40. National OB/GYN Industry Employment and Wage Profile¹⁰

Industry	Employment	Hourly Mean Wage	Annual Mean Wage
Offices of Physicians	16,820	\$104.70	\$217,780
General Medical and Surgical Hospitals	3,550	\$98.92	\$205,750
Outpatient Care Centers	870	\$105.83	\$220,120
Colleges, Universities and Professional Schools	250	\$50.67	\$105,400
Specialty (except Psychiatric and Substance Abuse) Hospitals	50	\$108.87	\$226,450

Psychiatrist

Psychiatrists are primary mental health physicians. They diagnose, prevent and treat disorders of the mind through a combination of medication, hospitalization, psychoanalysis and psychotherapy (personal counseling).¹⁵ As of October 13, 2015, there were 828 practicing

psychiatrists listed in Missouri. There are 58 counties, all rural that do not have a practicing psychiatrist. The five counties, all urban, with the highest number of employed psychiatrists are Greene, Boone, St. Louis City, Jackson and St. Louis County (Figure 41).¹⁵

Figure 41. Missouri Counties with the Highest Number of Practicing Psychiatrists¹⁹

County	Number of Practicing Psychiatrists
St. Louis County	208
Jackson	133
St. Louis City	114
Boone	76
Greene	39

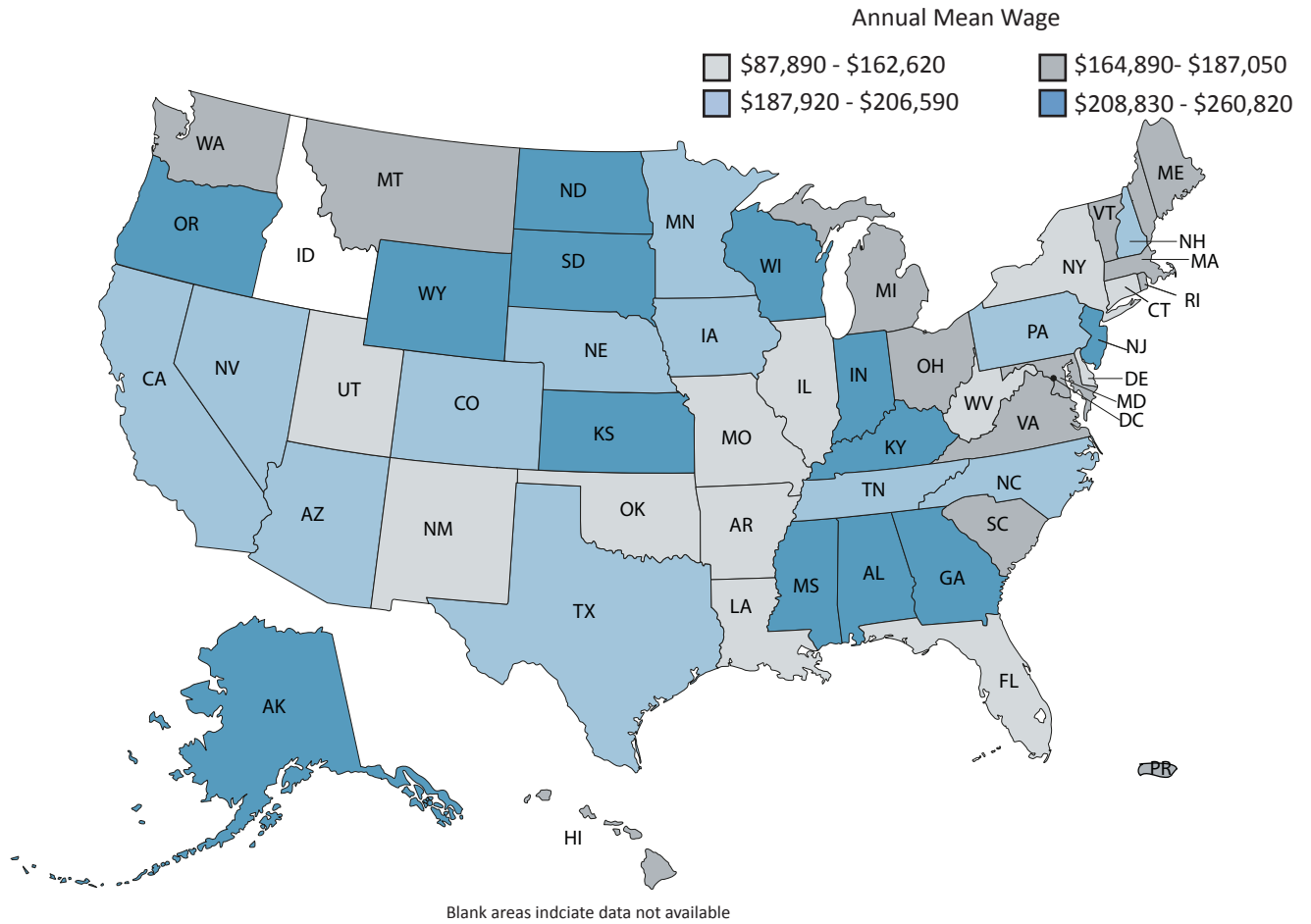
The national median annual wage for psychiatrists is \$181,880 compared with Missouri's which is significantly lower at \$136,980 (Figure 42). The mean annual wage of the state is \$162,620.¹² As of May 2014, St. Louis (260) and Kansas City (200) were listed as having the highest level

of employed psychiatrists in Missouri. The mean annual income for Kansas City is higher than that of the state at \$222,650.¹⁴ Figure 43 shows the annual mean wage of psychiatrists by state. Missouri is in the section with the lowest yearly wages.¹³

Figure 42. Comparison of the Missouri and National Annual Wage Percentiles for Psychiatrists¹³

Area Name	Annual 10th Percentile Wage	Annual Median Wage	Annual 90th Percentile Wage
Missouri	\$72,980	\$136,980	>=\$187,999
Nation	\$61,600	\$181,880	>=\$187,999

Figure 43. Bureau of Labor Statistics¹³
Annual mean wage of psychiatrists, by state. May 2014



The top industry employer for mental health physicians are offices of physicians with 0.31% industry employment (Figure 44). Although many of the industry profiles were

similar for family practitioners, pediatricians, general internists, and OB/GYNs; the psychiatric profile is slightly different.¹³

Figure 44. National Psychiatrist Industry Employment and Wage Profile¹³

Industry	Employment	Hourly Mean Wage	Annual Mean Wage
Offices of Physicians	7,570	\$84.20	\$175,140
Psychiatric and Substance Abuse Hospitals	3,690	\$85.56	\$177,960
Outpatient Care Centers	3,450	\$94.62	\$196,820
General Medical and Surgical Hospitals	3,220	\$82.53	\$171,660
Local Government (OES Designation)	1,430	\$94.00	\$195,510

Anesthesiologist

Anesthesiologists are physicians who administer drugs (anesthetics) prior to, during, or after surgery or other medical procedures, to reduce to sensation of pain. During an operation they are responsible for monitoring the patient’s breathing, body temperature, blood pressure and heart rate.¹⁵

As of October 13, 2015, there were 958 anesthesiologists listed as practicing in Missouri. There are a total of 77 Missouri counties, all defined as rural, that do not have a practicing anesthesiologist. The five counties that have the highest number of anesthesiology employment are Greene, Boone, St. Louis City, Jackson and St. Louis County, all urban counties. (Figure 45).¹⁹

Figure 45. Missouri Counties with the Highest Number of Practicing Practicing Anesthesiologists¹⁹

County	Number of Practicing OB/GYNs
St. Louis County	277
Jackson	179
St. Louis City	134
Boone	63
Greene	54

Both the median annual wage for the nation and Missouri in this specialty is greater than or equal to \$187,199. The

mean annual wage for Missouri is \$228,550. Annual wage by state is portrayed in Figure 46.⁷



Figure 46. Bureau of Labor Statistics⁷
Annual mean wage of anesthesiologists, by state. May 2014

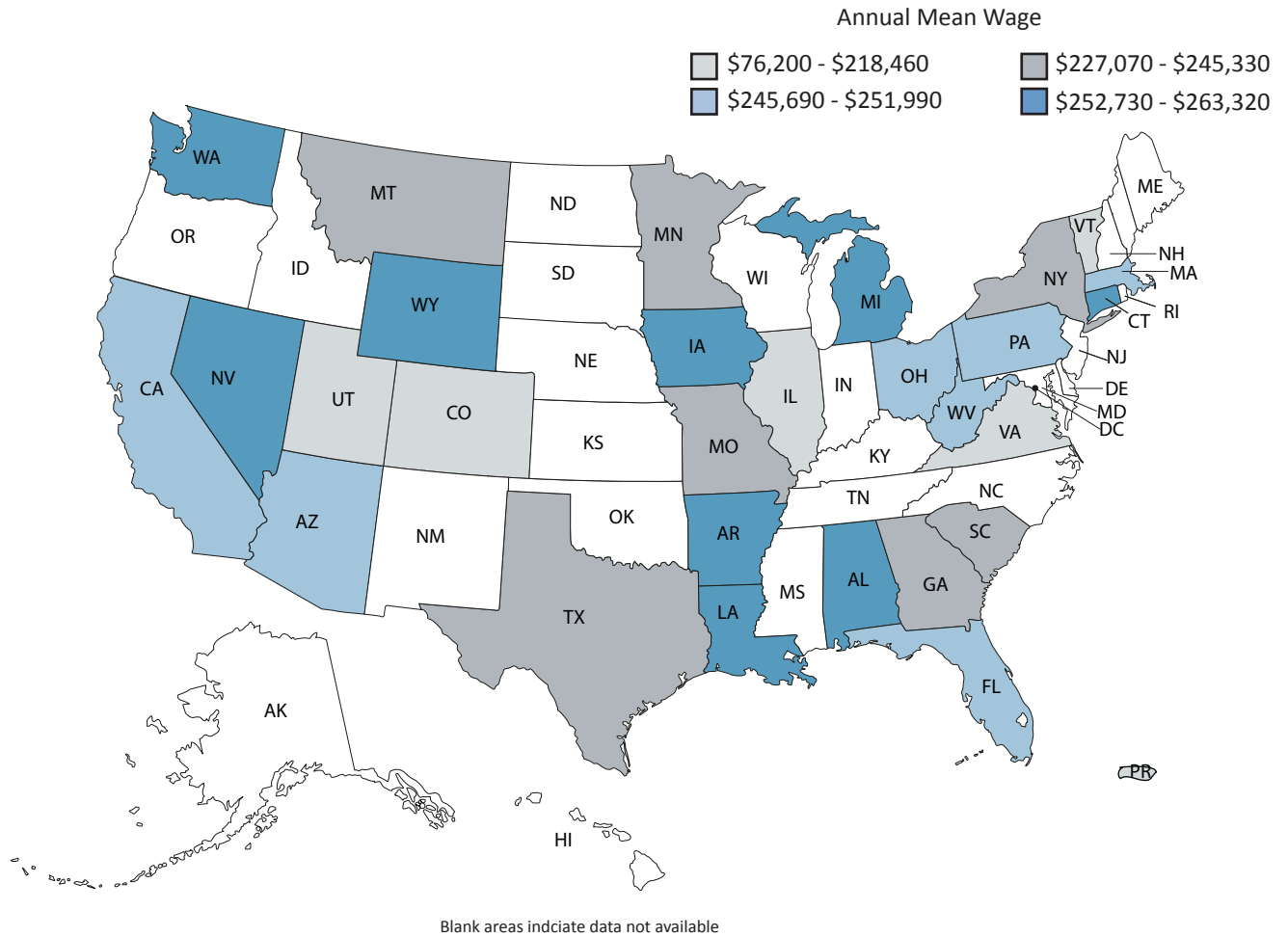


Figure 47. National Anesthesiologist Industry Employment and Wage Profile⁷

Industry	Employment	Hourly Mean Wage	Annual Mean Wage
Offices of Physicians	25,300	\$123.19	\$256,230
General Medical and Surgical Hospitals	3,220	\$92.29	\$191,970
Outpatient Care Centers	550	\$116.42	\$242,150
Colleges, Universities and Professional Schools	500	\$64.61	\$134,400
Specialty (except Psychiatric and Substance Abuse) Hospitals	220	\$91.62	\$190,570

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